

# Dams as new habitat in West African savannah

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Des observations d'oiseaux ont été faites dans le petit lac barrage à Kakikoka dans la province des terres du sud de Borgou province, au Bénin de septembre 1997 à mai 1998. De nombreux séjours ont été fait pendant la saison sèche (Octobre–Avril). Soixante dix espèces ont été enregistrées à proximité du barrage, incluant six nouvelles espèces dans la liste Bénin: *Tachybaptus ruficollis*, *Gallinula chloropus*, *Microparva capensis*, *Charadrius pecuarius*, *Charadrius forbesi* et *Calidris ferruginea*.

**W**aterbirds have always been difficult to find in the dry savannah of West Africa, only occurring in the small patches of suitable habitat, which are scarce in the dry season and often inaccessible during the rains. However, in West Africa, as occurred previously in southern Africa, habitat is increasing with the building of new dams. The increase in the waterbird population can be observed in a very short period of time, and the dam under study here has already been visited by several species previously unrecorded in northern Benin<sup>3,4,12,13,19</sup> or the whole country<sup>8</sup>.

The small dam at Kakikoka (09°01'N 02°16'E) in Borgou Province is one of several projects of the People's Republic of China in the Republic of Bénin. Constructed in 1995, it is c850 m in length and a little over 200 m wide. It has been designed to meet the needs of the semi-nomadic pastoralist Fulani or Peul people who lead their herds, often up to 500 cattle, and a smaller number of sheep and goats, on transhumance through the northern savannahs of several West African countries.

A remark in *Waterbirds*<sup>7</sup> prompted me to undertake a simple study of this small waterbody from September 1997–May 1998. Most visits were during the dry season (October–April) when the water is lowest and the area around the dam most accessible. I visited the site, often several times a month, to count some of the species present there.

The western end of the dam, where the feeder stream enters, is shallow, probably no more than 1 m deep, and is quickly colonised by *Nymphaea caerulea*<sup>1,6</sup> during the dry season, becoming almost totally clogged by the end of April when the water is at its lowest. There is also a reedbed at this end. The shores of the dam are bare laterite during much of the dry season. However, several species of rushes and grass are beginning to take root, as well as varied savannah flora after the first rains. There are small areas of muddy shore which attract a number of waders, particularly on spring passage. The wall and the eastern rocky shore are favourite resting and bathing places for several hundred Cattle Egrets which join a large roost of c5,000 birds on the Ouémé River to the south-west of the dam. To the east, behind the wall, there is a large area of savannah.

## Geographical location and climate

The dam is situated 5 km south of the village of Kakikoka, in the Guinea savannah of central Bénin. This vegetation covers much of the country, from 07°–11°N. The annual rainfall is c1,200 mm with the heaviest rains in July–September. Monthly mean temperatures are c26°C, with a maximum of 37°C in February–March.

The area immediately surrounding the dam is heavily cultivated. Crops include yam *Dioscorea* spp., cassava *Manihot esculenta*, rice *Oryza sativa*, *Pennisetum americanum*, cotton *Gossypium* spp. and groundnut *Arachis hypogaea*. However, due to the variety of habitats present—woodland, riparian vegetation, small areas of dense forest, and farmland—it is still relatively rich in bird species and I have recorded 300 species here over a 10-year period.

## Species of particular interest on the Kakikoka Dam

Clearly many of the species observed on the dam were expected at this type of waterbody—herons, bitterns, ducks, waders and rails. Many others on the list are common in the area and are coincidental or only distantly dependent on the water. A full list of the species noted within the perimeter of the dam is given in the appendix. However, the following are certainly the most significant in terms of being rarities, new to the area, significant Palearctic or intra-African migrants, or new Bénin records. The first sentence of each species account describes the species' overall status in Bénin.

### Little Grebe *Tachybaptus ruficollis*

New Bénin record. Single male on 12 September 1997. Two pairs in full breeding plumage on 19–20 February 1998. Three birds in breeding plumage on 8–15 April 1998. Two birds still present on 15 May 1998. No sign of any young but breeding seems probable given the species' behaviour elsewhere in West Africa. The species was apparently recorded on Lac Nakoué in south Bénin in March 1997. This is a significant exploitation of a small new area of suitable habitat<sup>2</sup>.



**Long-tailed Cormorant** *Phalacrocorax africanus*  
Common resident throughout. Up to 20 on the dam at any time.

**Little Bittern** *Ixobrychus minutus*

Single in the reeds at the stream end of the dam on 20 February 1998. Few records, although it is probably not uncommon and has been previously recorded both in the north, on the Terou River<sup>13</sup>, and in the south, at Cotonou (pers. obs.).

**Squacco Heron** *Ardeola ralloides*

Common resident and Palearctic migrant recorded throughout. Evidence of migration with a count of 20+ on 11 April 1998 and in the few days following, up from 1–6 birds on earlier counts, and down to two birds on 9 May 1998.

**Cattle Egret** *Bubulcus ibis*

Abundant intra-African migrant in October–June. Large numbers roost on the walls and stony shores during the afternoon.

**Green Heron** *Butorides striatus*

Common year-round resident on all suitable waters. Probably breeds here<sup>2,11</sup>.

**Little Egret** *Egretta garzetta*

Common resident and may breed in the area<sup>2,11</sup>. Several present at all times on the dam.

**Great Egret** *Egretta alba*

Not uncommon resident and Palearctic visitor, especially in the south. One or two occurrences on the dam in February–March.

**Purple Heron** *Ardea purpurea*

Not uncommon Palearctic migrant with some present year-round. Several occurrences in October–April.

**Grey Heron** *Ardea cinerea*

Common Palearctic migrant with some year-round. Several birds present at all times on the dam in October–June.

**White-faced Whistling-Duck** *Dendrocygna viduata*

Common breeding resident. The dam often has 100+ birds present. Many young birds present in December suggesting probable breeding in the area. Laying dates in Nigeria are July–October<sup>2,10</sup>.

**African Pygmy Goose** *Nettapus auritus*

Probable breeding resident, which is uncommon to rare, throughout the country. Three males on the dam on 23 February 1998 remained until March<sup>13</sup>. This is a significant exploitation of a small area of suitable habitat<sup>2,11</sup>.

**Garganey** *Anas querquedula*

Not uncommon Palearctic migrant to the extreme north, particularly along the Niger River and in Park W<sup>12,17,20</sup>. A pair at the dam on 20 February to at least 14 March 1998 were further south than previous records, although it has

been recorded to 06°38'N in Togo<sup>3</sup>. New record for this area and a significant exploitation of suitable habitat.

**Vulturine Fish Eagle** *Gypobierax angolensis*

Uncommon throughout. A pair at the dam in November 1997.

**Egyptian Vulture** *Neophron percnopterus*

Rare intra-African migrant or vagrant. An adult on 20 December 1998. No previously published records<sup>9</sup>, but there is a record from the north-east part of Pendjari Park in the late dry season of 1977, and records from Park W, near the Chutes de Koudou, in December 1977 (A. Green pers. comm.). It was also recorded by Szaniawskyski<sup>18</sup> in the Bénin sector of Park W. Uncommon in Nigeria<sup>10</sup> and considered a vagrant to both Ghana<sup>15</sup> and Togo<sup>3</sup>.

**Marsh Harrier** *Circus aeruginosus*

Uncommon in this area. Widely recorded in the south. Single bird on the dam in December–March.

**Allen's Gallinule** *Porphyrio alleni*

Uncommon intra-African migrant. Some previous evidence of breeding<sup>4</sup>. Immature bird on 12 September 1997. May breed here.

**Common Moorhen** *Gallinula chloropus*

Not uncommon resident throughout, breeding probable as attempted nesting has been observed. Several previous records<sup>3</sup> but not listed by Dowsett & Forbes-Watson<sup>9</sup>. Six birds present on the dam on 23 February 1998, and a single on 9 May 1998. Probably breeds here.

**African Jacana** *Actophilornis africanus*

Common breeding resident throughout. Breeding previously recorded in the area and almost certainly breeds on the dam where up to 50 including juveniles present at all times<sup>4</sup>.

**Lesser Jacana** *Microparra capensis*

New Bénin record. Certainly the most significant record for the dam. The species is uncommon in Burkina Faso<sup>21</sup>, Niger<sup>16</sup> and Nigeria<sup>9</sup>, and has not been recorded in either Ghana<sup>15</sup> or Togo<sup>3</sup>, although it has been recorded in Ivory Coast<sup>19</sup>. It is reportedly local in Mali and Chad<sup>11</sup>. It has, however, been recorded on the Mekrou River in Park W<sup>16</sup>.

At 18.20 hr on 7 May 1998 I observed what at first appeared to be a small *Tringa* walking on the lilies c70 m ahead of me. I quickly realised that this tiny bird was very probably *Microparra capensis* and I had excellent views of the bird through a telescope over the next 45 minutes and confirmed it as an adult of this species. It had a rich chestnut crown, a white supercilium and a chestnut brown eyestripe. The chestnut on the crown extended onto the nape and widened across the neck-sides. A rich golden-yellow wash was apparent on the neck and upper breast. Pure white underparts. Slightly greenish legs. Orange or



brownish bill. Its tiny size made confusion even with a juvenile *Actophilornis africanus* unlikely. I observed the bird again on the evening of 9 May with two companions and on several occasions thereafter until at least 17 May.

**Greater Painted-Snipe** *Rostratula benghalensis*  
Uncommon resident but probably overlooked because of its discreet behaviour and preference for often inaccessible habitat. Single female recorded on 17 May 1998. Several previous records from most areas of the country.

**Ringed Plover** *Charadrius hiaticula*  
Common Palearctic migrant in the south. Single bird on 15 April 1998 is the first inland record.

**Kittlitz's Plover** *Charadrius pecuarius*  
New Bénin record. Rare intra-African migrant. An adult in breeding plumage at the dam on 8 April 1998, not seen on subsequent days. Several birds, including immatures, at Grand Popo on 19–21 November 1995, in an area of drying swamp in front of the Auberge at Grand Popo<sup>5</sup>, and at nearby Anecho in Togo on 14 January 1995. The species does not appear on Dowsett & Forbes-Watson's list<sup>9</sup> and is rare in Togo<sup>3</sup>. Reported to occur only in coastal Bénin<sup>11</sup>, although there are several records far inland in West Africa<sup>16</sup>.

**Forbes' Plover** *Charadrius forbesi*  
New Bénin record. Uncommon to rare. Two birds observed on the dam on 4 April 1998. Two birds recorded on 17 January 1992 near a pool on the road from Ouidah to the Togo border. The species was not mentioned by Dowsett & Forbes-Watson<sup>9</sup>.

**Curlew Sandpiper** *Calidris ferruginea*  
New Bénin record. Uncommon Palearctic winter visitor or passage migrant principally in the south of the country<sup>5</sup>. Single recorded on the dam on 4 April 1998. Previously recorded on 21 January 1994 and 21 November 1995 at the south end of Lac Ahémé. Twenty-three birds recorded during the 1996 Waterfowl Census<sup>8</sup>. Not listed by Dowsett & Forbes-Watson<sup>9</sup>.

**Common Snipe** *Gallinago gallinago*  
Uncommon Palearctic migrant but perhaps overlooked. A record on 23 February 1998 was only the second for the area.

**Greenshank** *Tringa nebularia*  
Common Palearctic migrant, widely recorded but only one previous record for this area. Single on 15 April 1998 when there were also several other migrating waders present suggesting that the dam may be an important site for spring migrants.

**Green Sandpiper** *Tringa ochropus*  
Not uncommon Palearctic migrant in October–April. Sev-

eral observations at a muddy end of the dam.

**Wood Sandpiper** *Tringa glareola*  
Common Palearctic migrant throughout the country. A few birds present during October–April, with 20 on 15 April 1998 and smaller numbers on following days indicating northward migration at that time.

**Common Sandpiper** *Actitis hypoleucos*  
Very common Palearctic migrant throughout the country. One or two birds present on the dam during October–May.

**Four-banded Sandgrouse** *Pterocles quadricinctus*  
Probably not uncommon in the dry north<sup>13</sup> and in this area during the dry season. Recorded in December and April.

## Conclusions

This brief study is interesting for a number of reasons. The appearance of Little Grebe, African Pygmy Goose, Garganey and most particularly Lesser Jacana are all associated with the presence of *Nymphaeae* which is to be expected on this type of still-water, and all are new to this area. Greater Painted Snipe, Kittlitz's Plover, Forbes' Plover and Spur-winged Lapwing *Vanellus spinosus* are all resident waders. Kittlitz's and Forbes' Plovers are relatively rare in this area and thus of interest here. Several more species will inevitably occur and the site will repay more constant observation. African Crane *Crex egregia* has, for example, already been recorded in the area<sup>3</sup> and almost certainly occurs in the vicinity of the dam.

The dam supports a number of Palearctic migrants, particularly during spring migration in March–April, as indicated by the occurrence of Squacco Heron in some numbers, Purple Heron, Ringed Plover, Common Snipe, Greenshank, and Green, Wood, Common and Curlew Sandpipers. Little Stint *Calidris minutus* has already been recorded in the area and appears likely to be recorded at the dam in the future.

Several species probably breed at the dam or nearby, including Little Grebe, Long-tailed Cormorant, Darter, White-faced Whistling-Duck, Black Crane *Amaurornis flavirostris*, Allen's Gallinule, Common Moorhen and African Jacana.

Finally, Garganey and Ringed Plover are new to southern Borgou, and Little Grebe, Common Moorhen, Lesser Jacana, Kittlitz's Plover, Forbes' Plover and Curlew Sandpiper are new to the Bénin list<sup>8</sup>. ♀

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B. P. 302, Parakou, Bénin.

Appendix: List of 72 species observed within the perimeters of the dam.

Little Grebe *Tachybaptus ruficollis*  
 Long-tailed Cormorant *Phalacrocorax africanus*  
 Darter *Anhinga melanogaster*  
 Little Bittern *Ixobrychus minutus*  
 Squacco Heron *Ardeola ralloides*  
 Cattle Egret *Bubulcus ibis*  
 Green Heron *Butorides striatus*

Little Egret *Egretta garzetta*  
 Great Egret *Egretta alba*  
 Purple Heron *Ardea purpurea*  
 Grey Heron *Ardea cinerea*  
 Hamerkop *Scopus umbretta*  
 White-faced Whistling-Duck *Dendrocygna viduata*  
 African Pygmy Goose *Nettapus auritus*  
 Garganey *Anas querquedula*  
 Black-shouldered Kite *Elanus caeruleus*  
 Vulturine Fish Eagle *Gypohierax angolensis*  
 Egyptian Vulture *Neophron percnopterus*  
 Marsh Harrier *Circus aeruginosus*  
 African Little Sparrowhawk *Accipiter minullus*  
 Lizard Buzzard *Kaupifalco monogrammicus*  
 Red-necked Buzzard *Buteo auguralis*  
 Black Crake *Limnocorax flavivestra*  
 Allen's Gallinule *Porphyrio alleni*  
 Common Moorhen *Gallinula chloropus*  
 Denham's Bustard *Neotis denhami*  
 African Jacana *Actophilornis africanus*  
 Lesser Jacana *Microparra capensis*  
 Greater Painted-Snipe *Rostratula benghalensis*  
 Ringed Plover *Charadrius hiaticula*  
 Kittlitz's Plover *Charadrius pecuarius*  
 Forbes' Plover *Charadrius forbesi*  
 Spur-winged Lapwing *Vanellus spinosus*  
 Curlew Sandpiper *Calidris ferruginea*  
 Common Snipe *Gallinago gallinago*  
 Greenshank *Tringa nebularia*  
 Green Sandpiper *Tringa ochropus*  
 Wood Sandpiper *Tringa glareola*  
 Common Sandpiper *Actitis hypoleucos*  
 Four-banded Sandgrouse *Pterocles quadricinctus*  
 African Green Pigeon *Treron calva*  
 Black-billed Wood Dove *Turtur abyssinicus*  
 Vinaceous Dove *Streptopelia vinacea*  
 Violet Turaco *Musophaga violacea*  
 Western Grey Plantain-eater *Crinifer piscator*  
 African Palm Swift *Cypsiurus parvus*  
 Little Swift *Apus affinis*  
 Woodland Kingfisher *Halycon senegalensis*  
 Striped Kingfisher *Halycon chelicuti*  
 Pied Kingfisher *Ceryle rudis*  
 Carmine Bee-eater *Merops nubicus*  
 Abyssinian Roller *Coracias abyssinnica*  
 African Grey Hornbill *Tockus nasutus*  
 Singing Bush Lark *Mirafra cantillans*  
 Sun Lark *Galerida modesta*  
 Mosque Swallow *Hirundo senegala*  
 House Martin *Delichon urbica*  
 Yellow Wagtail *Motacilla flava*  
 Common Bulbul *Pynonotus barbatus*  
 Green-backed Eremomela *Eremomela pusilla*  
 Bleating Warbler *Camaroptera brachyura*  
 White-shouldered Black Tit *Parus leucomelas*  
 Scarlet-chested Sunbird *Nectarinia senegalensis*  
 Long-tailed Shrike *Corvinella corvina*  
 Fork-tailed Drongo *Dicrurus adsimilis*  
 Purple Glossy Starling *Lamprolornis purpureus*  
 Northern Red Bishop *Euplectes franciscanus*  
 Yellow-mantled Whydah *Euplectes macrourus*  
 Red-cheeked Cordon-Bleu *Uraeginthus bengalus*  
 Orange-cheeked Waxbill *Estrilda melpoda*  
 Pin-tailed Whydah *Vidua macroura*  
 Yellow-fronted Canary *Serinus mozambicus*





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